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Filed : January 19, 2000

REMARKS

In the outstanding Office Action, the Examiner has rejected Claims 12-22. Claims 12, 20, and 21 have been amended, and Claims 23-26 have been added. No new matter has been added. Reconsideration and allowance of all Claims 12-26 in light of the present remarks is respectfully requested.

Discussion of Rejections Under 35 U.S.C. § 103(a)

The Examiner has rejected Claims 12-22 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,675,629 to Raffel, et al.

In regard to Claims 12 and 20, the Examiner stated that Raffel teaches a cordless communication system comprising "at least one identification module, wherein sections of data of the identification module used in the base station are identical to sections of data on a chip card of an access-authorized mobile terminal (col. 10, lines 50-65); and software implemented in the base station for processing of data read from the identification module and for authenticating the mobile terminal relative to the base station through the processed data, wherein the base station fulfills the same functions and tasks with respect to access control and authentication as the home location register (See figure 2, numeral 10, 12, 16 col 7 lines 25-37) and, respectively, the authentication center of the mobile communication system." The Examiner recognized that "Raffel fails to teach a read/write unit within a base station which [is] configured to read and write information from and to." However, the Examiner asserted that "the use of readable and writeable memory is well known in the art", and that "it would have been obvious to one of ordinary skill in the art at the time of the invention to combine [the] above teaching with [the] Raffel cordless Base Station, in order to provide more flexibility for the wireless communication system."

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 U.S.P.Q. 580.

Amended Claim 12 recites a method of operating a cordless communication system, comprising "reading and writing from and to, respectively, at least a first identification module through a read and write unit of the base station, wherein sections of data of the first identification module used in the base station are identical to sections of data stored on a second

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identification module of an access-authorized mobile terminal; processing data read from the first identification module through software implemented in the base station, using a random number generated at the base station, so as to generate a first authentication result; processing data read from the second identification module, using the random number generated at the base station, so as to generate a second authentication result; authenticating the mobile terminal with regard to the base station through the first authentication result and the second authentication result, wherein the base station fulfills the same functions and tasks with respect to access control and authentication as a home location register and, respectively, an authentication center of the mobile communication system”.

Raffel describes a cordless cellular base station capable of communicating with a cellular network compatible mobile station. *Raffel at col. 10, lines 53-55.* Raffel further teaches a mobile station registered with a cellular network and assigned a mobile station identification number (MIN). *Col. 10, lines 65-67.* The cordless cellular base station maintains a cordless cellular base station registration list which stores the MIN of the mobile stations which have been previously granted registration privileges with the cordless cellular base station. *Col. 25, lines 26-32.* In the event a mobile station attempts to register with a cordless cellular base station, the cordless cellular base station accepts or rejects the attempted registration based on whether the mobile station identification number (MIN) of the mobile station matches a MIN stored in the automatic registration list in the cordless cellular base station. *Col. 30, lines 43-58.* When the mobile station has registered with the cordless cellular base station, the mobile station functions as a cordless telephone mobile station operating in the cordless telephone landline service mode. *Col. 32, lines 8-11.*

However, Raffel fails to teach or suggest “processing data read from [a] first identification module through software implemented in the base station, using a random number generated at the base station, so as to generate a first authentication result; processing data read from the second identification module, using the random number generated at the base station, so as to generate a second authentication result”. Furthermore, Raffel in no way describes “authenticating the mobile terminal with regard to the base station through the first authentication result and the second authentication result”.

In addition, Applicant respectfully disagrees with the Examiner’s assertion that Raffel teaches a cordless communication system “wherein the base station fulfills the same functions

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and tasks with respect to ... authentication as the authentication center of the mobile communication system". Raffel simply states that the cellular network "can be broken down into the following components: the mobile switching complex (MSC) 222, the home location register (HLR) 224, a traditional visitor location register (VLR) 226 and the cordless cellular base station visitor location register (CCBS VLR) 228." *Raffel at col. 34, lines 61-66*. That Raffel teaches the "cellular system usually contains the HLR/VLR/AUC" as asserted by the Examiner cannot be properly construed as a teaching or suggestion of a base station which fulfills the same functions and task with respect to authentication as the authentication center of the mobile communication system.

Thus, as the prior art of record neither teaches nor suggests all of the elements as recited in amended Claim 12, Applicant respectfully submits Claim 12 for further review as patentable subject matter.

As amended Claim 20 recites limitations similar to those recited in the method of Claim 12, the arguments with respect to Claim 12 similarly apply to Claim 20, and thus, Claim 20 is respectfully submitted for further review as patentable subject matter.

Because Claims 13-19, and 20-24 and depend from Claims 12 and 20, pursuant to 35 U.S.C. § 112, ¶ 4, they incorporate by reference all the limitations of the claim to which they refer. It is therefore submitted that these claims are in condition for allowance at least for the reasons expressed with respect to the independent claim, and for their other features.

New Claims

New Claim 25 recites a method of operating a cordless communication system comprising, *inter alia*, "generating a random number and generating a first authentication result based on the random number and the secret key using a ciphering algorithm at the base station; generating a second authentication result based on the random number and the secret key using a ciphering algorithm at the access-authorized mobile terminal; authenticating the mobile terminal with regard to the base station through the first and second authentication results such that the mobile terminal authenticates directly with the base station". Support for new Claim 25 can be found in Applicant's specification at page 2, lines 26-30.

New Claim 26 recites a method of operating a cordless communication system comprising, *inter alia*, "transmitting a specific identification periodically from the base station to

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indicate presence and readiness for operation during a standby mode; ... processing data read from the first identification module through software implemented in the base station so as to generate a first authentication result; processing data read from the second identification module so as to generate a second authentication result; authenticating the mobile terminal with regard to the base station using the first and second authentication results". Support for new Claim 26 can be found in Applicant's specification at page 5, lines 26-29.

Applicant respectfully submits that the prior art of record fails to teach or suggest every element as recited in each of Claims 25-26. Applicant therefore submits that new Claims 25-26 are in condition for allowance.

Applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims for patentability purposes pursuant to statutory section 103, the reasons therefor, and arguments in support of the patentability of the pending claim set are presented above. In light of these amendments and remarks, reconsideration and withdrawal of the outstanding rejections is respectfully requested.

Any claim amendments which are not specifically discussed in the above remarks are not made for patentability purposes, and it is believed that the claims would satisfy the statutory requirements for patentability without the entry of such amendments. Rather, these amendments have only been made to increase claim readability, to improve grammar, and to reduce the time and effort required of those in the art to clearly understand the scope of the claim language.


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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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